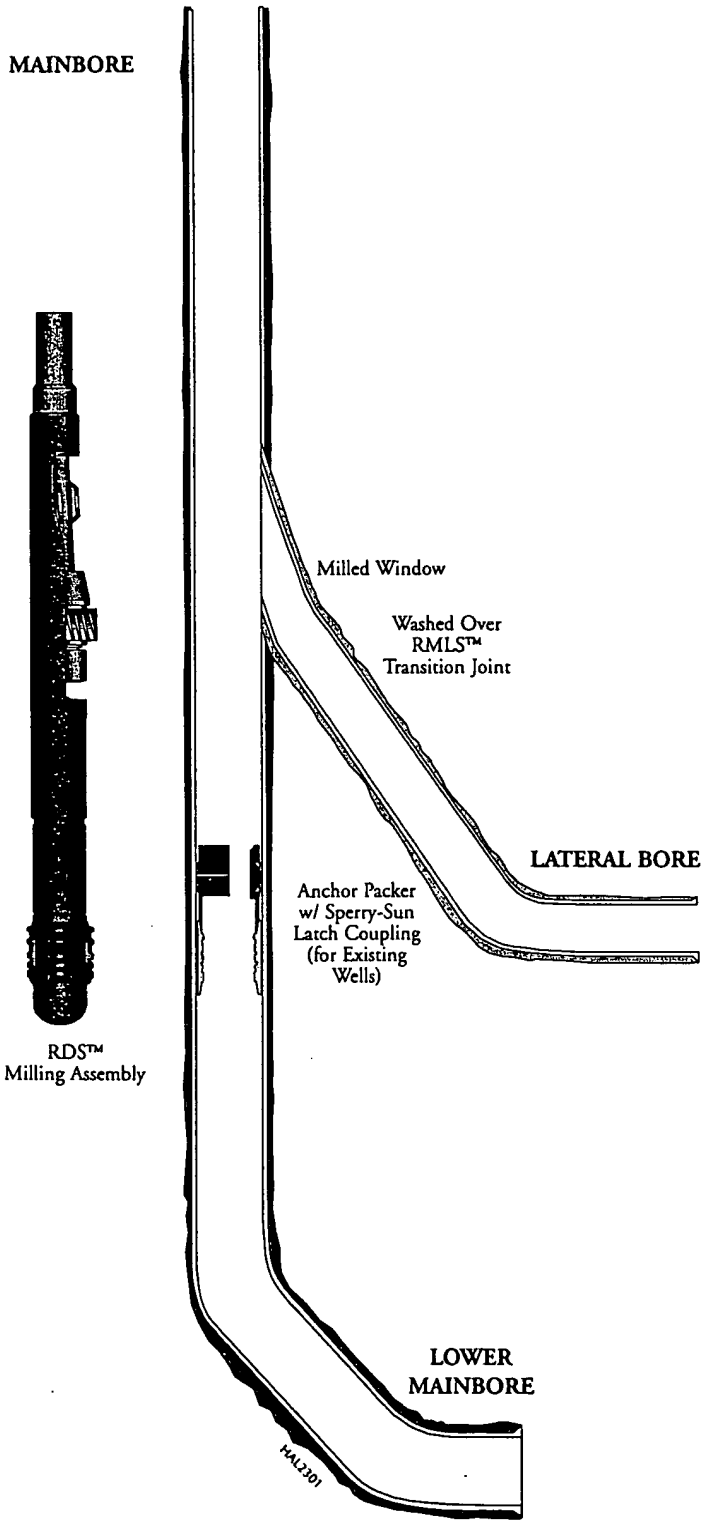
sperry-sun DRILLING SERVICES

Multilateral Services *Profile*

a Halliburton company

RDS™ Re-entry Drilling System

ExitMaster™ Milled Casing Exit Systems



RDS™ Junction
TAML Level 2, 3, or 4

Application

The RDS™ system is designed for use in new or existing wells that are to be developed as multilaterals to exploit additional zones or reserves. The RDS™ system incorporates a special window milling machining that allows the creation of a precise window geometry at a precise depth and azimuth on a repeatable basis. This control of the window geometry and position makes the RDS™ windows particularly useful for level 2, 3, and 4 wells, in which lateral re-entry and through-tubing re-entry are required, and when level 5 completions will be installed. The RDS™ windows are machined with an elongated full-gauge aperture along their entire length and are exactly in line with the axis of the casing. The RDS™ system eliminates problems associated with conventionally milled windows in which window geometry is typically elliptical and spiraled with no control over precise depth, azimuth, and full-gauge section length. The straight, longer window geometry eliminates the dog leg severity problems that are seen when running lateral liners or tools into the lateral bore through conventional milled windows.

Features

- Latch coupling and anti-rotation anchor packer system used as RDS™ platform
- Durable machining head with integral circulation paths
- Track-guided system for precise window geometry and length
- Precise azimuth and depth control with anchor packer and latch coupling
- Compatible with RMLS™ retrievable multilateral system for level 4 and 5 junction creation
- Integral barriers and junk subs for debris collection and control

Benefits

- Applicable to existing wells (re-entry)
- Window geometry and position control allows repeatable lateral re-entry for life of well
- Compatible with LRS™ lateral re-entry system and level 5 MSCS® multi-string system completion
- Allows existing main well to be produced to lower economic threshold
- Lower installation and maintenance costs relative to other level 4 systems
- Rapid single-trip window machining
- Precise window geometry

Multilateral Services *Specifications*

RDS™ Re-entry Drilling System

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Typical Installation Sequence

- Remove completion from existing well.
- Run in hole RDS™ assembly with anchor packer and latch coupling, orient, and set. Mill window and retrieve milling machine, leaving packer and latch coupling as anchor and orientation reference.
- Run RMLS™ drilling whipstock with mills and dress junction.
- Drill lateral as required.
- Run in hole lateral liner and cement as required.
- Washover lateral liner top to re-open mainbore and retrieve whipstock.
- Install completion and flow well.

RDS™ System Specifications				
	TAML Level 2 or 4			
System casing size	7 in. 177.8 mm	7 in. 177.8 mm	9-5/8 in. 244.5 mm	9-5/8 in. 244.5 mm
Casing weight	26-29 lb/ft	26-29 lb/ft	43-47 lb/ft	43-47 lb/ft
Window type	Milled			
Anchor type	Latch coupling	Anchor packer	Latch coupling	Anchor packer
Lateral liner type	None, drop liner, washed over transition joint			
Lateral hole size	6 in. 152.4 mm	6 in. 152.4 mm	8-1/2 in. 215.9 mm	8-1/2 in. 215.9 mm
Lateral liner size	4-1/2 in. 114.3 mm	4-1/2 in. 114.3 mm	7 in. 177.8 mm	7 in. 177.8 mm
Lower mainbore access	Full gauge 6.059 in.	Packer bore 4 in.	Full gauge 8.525 in.	Packer bore 6 in.

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